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10/626,157	07/24/2003	Jose Angel de la Rosa	100200997-1	9699

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EXAMINER

RAMIREZ, JOHN FERNANDO

ART UNIT	PAPER NUMBER
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3737

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/626,157
Filing Date: July 24, 2003
Appellant(s): DE LA ROSA ET AL.

Nathan R. Rieth
HEWLETT PACKARD COMPANY
For Appellant

EXAMINER'S ANSWER

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This is in response to the appeal brief filed April 17, 2006 appealing from the Office action mailed 02/06/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,222,274	Johnson	09-1980
6,685,644	Seo et al.	02-2004
5,709,206	Teboul	01-1998
6,423,002	Hossack	07-2002
6,275,722	Martin et al.	08-2001
4,233,988	Dick et al.	11-1980
5,433,198	Desai	07-1995

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 9 (original) is again rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US4222274) which teaches an apparatus and method for an external ultrasound transducer ring for sensing acoustic reflectivity parameters which is movable by means of rotational and elevational motors 46,

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66 respectively in order to derive a 3D image set of an object by combination of individual ultrasound image scans under control of computer processor 188.

Johnson is capable of imaging surface features of the breast since the breast including its surface is part of the investigated volume within the three-dimensional scan apparatus.

Claims 10-12 and 24 - 26 are again rejected under 35 U.S.C. 102(b) as being anticipated by Seo (US6685644) which teaches method and structure for an external ultrasound imaging device 11, internal ultrasound imaging device 26 and a processor 18 which combines image portions as shown in Fig. 5 to create a composite 3D image display of the object including manipulable presentations as in fig. 10o The adventitia and artery immediate surrounding would be understood to be external surface features of the artery proper by the artisan.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

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Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2, 13 - 14, 16, 18-23 as amended are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US4222274, of record), further in view of Teboul (US 5709206). Johnson as noted teaches an apparatus and method for an external ultrasound transducer ring (see figs. 1 and 2) for sensing acoustic reflectivity parameters which is movable by means of rotational and elevational motors 46, 66 respectively in order to derive a 3D image set of an object by combination of individual ultrasound image scans under control of computer processor 188. Whereas Johnson does not explicitly state that the system is adapted so that external feature data can be gathered, it would have been obvious in view of Teboul that during mammography external or surface features (nipple, areolae, external duct entrances) would be gathered among the imaged data.

Claims 3, 7 as amended are rejected under 35 U.S.C. 103(a) as being obvious over Seo (US6685644, of record) further in view of Hossack et al. (US6423002). Seo as earlier noted teaches method and structure for an external ultrasound imaging device 11, internal ultrasound imaging device 26 and a processor 18 which combines image portions as shown in Fig. 5 to create a composite 3D image display of the object including manipulable presentations as

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in fig. 10. It would have been obvious in view of Hossack et al to consider the imaging device 11 as imaging the external surface of the vascular object being imaged since the artisans refer to vessels or vascular chambers as having external surfaces, see col. 9 lines 57 - 65 thereof.

Claims 4 - 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo in view of Hossack et al, further in view of Johnson or Dick et al. (US4233988). Since Seo uses conventional external ultrasound imaging, it would have been obvious in view of Johnson to externally image with a ring imager or in view of Dick et al. to image with an imaging ring in order to compile an external 3D image of an object.

Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo in view of Hossack et al, further in view of Martin et al. (US6275722).

Whereas Seo does not mention MRI devices, it would have been obvious in view of Martin et al. to reconstruct a composite 3D image using an internal MRI coil since this would allow the external imager to positionally reference the images.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claim 3 above, and further in view of Desai (US5433198).

Whereas the former merely suggests in col. 1 that X-ray fluoroscopy may be used to track a probe tip, it would have been obvious in view of the latter to employ internal x-ray visualization in order to localize a probe tip such as in Seo where ultrasound is performing the main internal scan.

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Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Teboul as applied to claim 13 above, and further in view of Martin et al. for reasons analogous to that set forth above.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Teboul, further in view of Martin et al. as applied to claim 15 above, and further in view of Seo. Whereas the former are silent as to overlay of images, it would have been obvious in view of the latter to blend-overlay internal and external images in order to obtain the adaptive benefits of both modes.

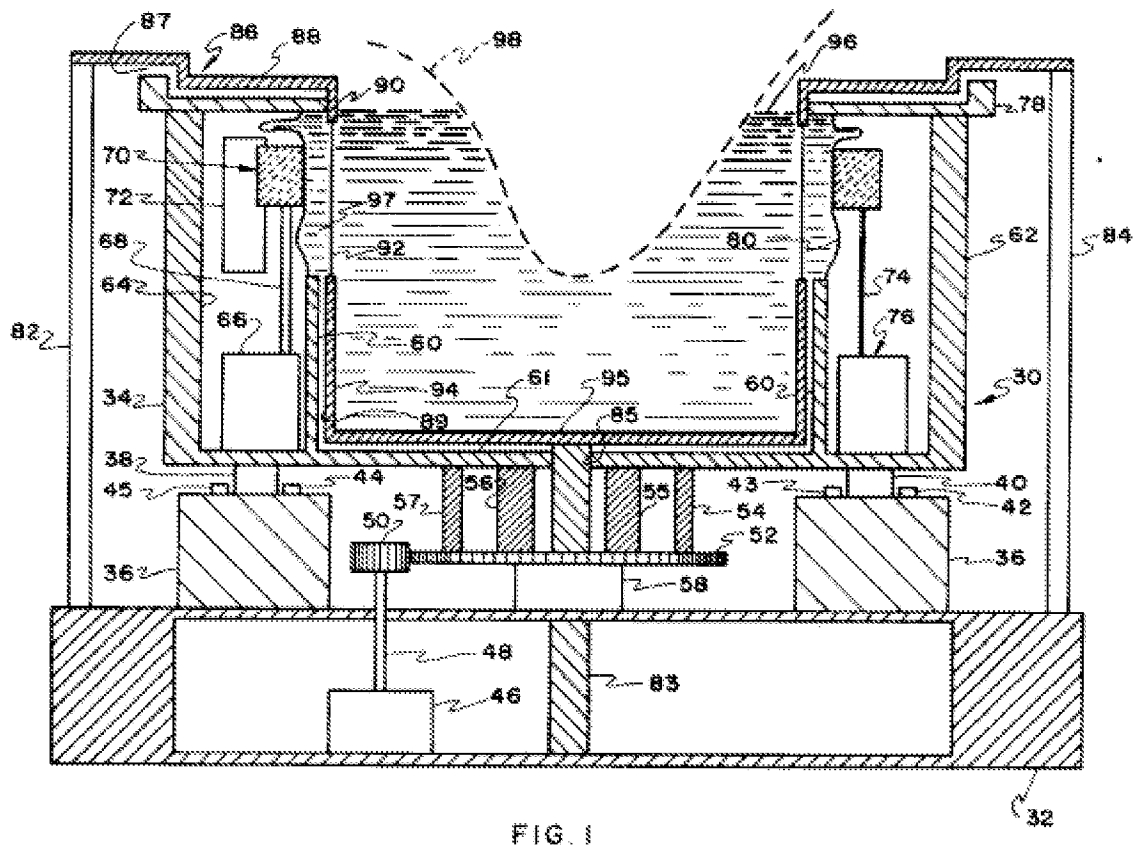
(10) Response to Argument

Applicant's arguments filed 04/17/06 have been fully considered but they are not persuasive.

Applicant alleges that the Johnson reference used under section 102(b) does not have a system adapted to gather external feature data of an object. However the examiner of record disagrees with applicant's assertions. Since the Johnson apparatus for breast imaging as readable against the claims uses an ultrasound scanning with a waterbath (see fig. 1, col. 4 line 38 – col. 5 line 27) or contact scanner is capable of detecting features characterized as external in the

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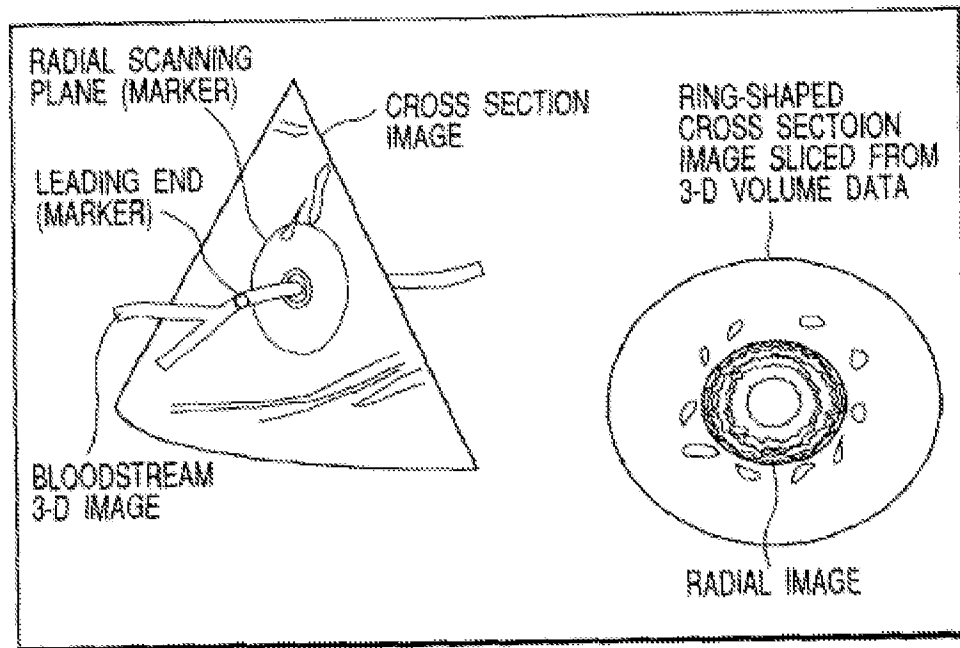
sense of being also externally visible.



In regards to the 102 (b) rejection, applicant's alleges that the Seo reference does not obtain external images of the body. The examiner disagrees with applicant's allegations. As argued before, Seo teaches a method and structure for an external ultrasound imaging device 11, internal ultrasound imaging device 26 and a processor 18 which combines image portions as shown in Fig. 5 to create a composite 3D image display of the object including manipulable presentations as in fig. 10. Furthermore, in the case of intravascular

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ultrasound, an image of a vessel surface is considered to be of an exterior surface feature of the vessel e.g. as illustrated by Seo in Fig. 5.

**FIG. 5**

Based on the above observations, the Johnson reference disclose a system adapted to gather external feature data of an object and the Seo reference teaches obtaining external images of the body.

With respect to the rejections under section 103(a), applicant alleges that Johnson nor Seo nor Teboul or Hossack teach or suggest imaging the external features of an object. However the examiner of record disagrees with applicant's assertions for reasons analogous to that set forth above.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/John F Ramirez/
Examiner, Art Unit 3737

Conferees:

/Angela D Sykes/

Supervisory Patent Examiner, Art Unit 3762

Angela Sykes
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